Table of Contents

Preface

Chapter 1: Engineering Design and Quality Control

| Numerical Study on the Influence of Directional Natural Frequency on Flow Induced Vibrations | |
|--|----|
| S. Janardhanan and V. Chandran | 3 |
| Automotive Multi-Leaf Spring Design and Optimization through FEA R. Sabarish, R. Hariharan, R.J.G.R. Nimal and R. Sangamaeswaran | 11 |
| Study and Analysis on Internal Quality Assessment to Overcome Defects in Apparel | |
| Industry G. Lekhasri, K.M. Bhaarani, D. Durgadevi and M. Sowmiya | 19 |
| Chapter 2: Mechatronics and Robotics | |
| Design and Development of a Wi-Fi-Enabled Helping Robot for Enhanced Human Assistance | |
| S. Ayyappan, J. Gokul, J. Priyadharshini, S. Santhiya and M. Santhosh | 43 |
| Design of Parallel Prefix Adder T. Mani, M. Kathirvelu, A. Harishkumar, S. Praveen, N. Selvakumar and M. Dhanushiya | 49 |
| Sustainable Charging Infrastructure for Electric Vehicles: Harnessing Solar and Wind | |
| Energy N. Lakshmipriya, S. Ayyappan and C. Gokul | 57 |
| Chapter 3: Communication Engineering and the Internet of Things | |
| Self Automated Borewell Barrier with Child Safe Guard Using Iot R. Swaranambigai, M. Anish Ansari, S. Madhavan, P. Mohan and M. Mohana Swetha | 71 |
| Design of Wearable Textile Antenna for Medical and Wireless Application | |
| A. Anand Kumar, M. Kathirvelu, C. Bharathiraja, G. Guruprasath, P. Karthickprasad and D. Navinya | 79 |